

Warming Globally; Acting in California (and the Bay Area)

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**“The Temperature’s Rising”
A Town Hall Meeting on
Solutions to the Global Warming Crisis
Assembly District 14 – Hon. Loni Hancock**

04/14/2007

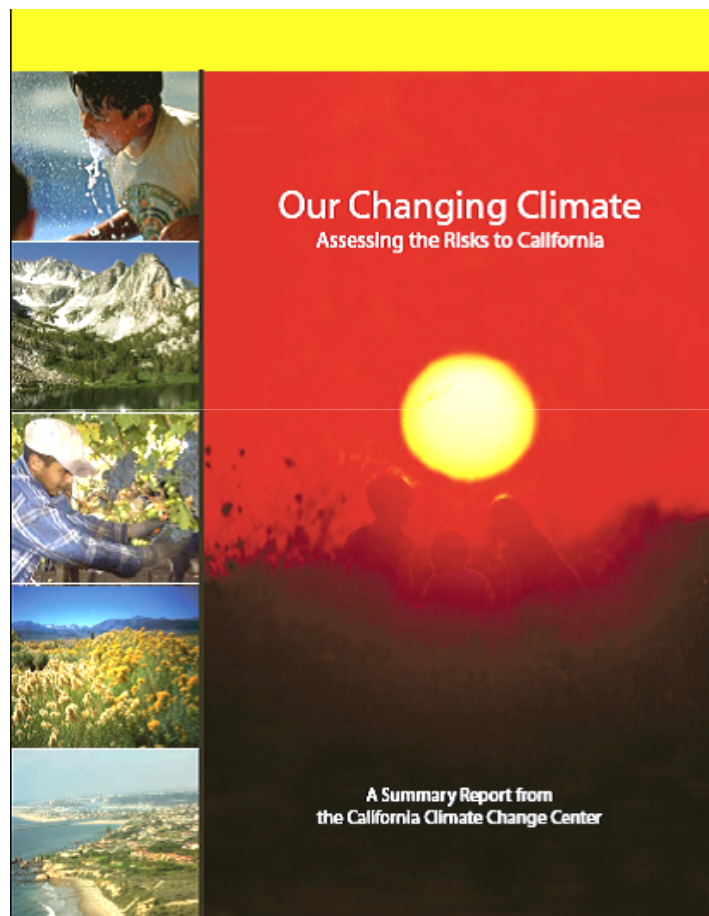


Union of Concerned Scientists

- **The Union of Concerned Scientists (UCS) is a leading national science-based nonprofit working for a healthy environment and a safer world.**
 - **UCS combines sound and independent scientific research with citizen action to develop innovative, practical solutions and secure responsible changes in government policy, corporate practices, and consumer choices.**
- | | |
|----------------------------------|-------------------------------|
| ◆ Global Warming | ◆ Renewable Energy |
| ◆ Clean Transportation | ◆ Nuclear Safety |
| ◆ Sustainable Agriculture | ◆ Scientific Integrity |

Founded in 1969 by MIT faculty members

California Climate Change Scenarios Report



■ Based on eighteen scientific papers involving
over 70 researchers from:

- Scripps Institution of Oceanography
- U.C. Berkeley
- U.C. Davis
- Lawrence Berkeley Lab
- Santa Clara University
- U.S. Forest Service
- Oregon State University
- Union of Concerned Scientists
- CA Air Resources Board (CARB)
- California Energy Commission (CEC)

Report available: www.energy.ca.gov

or www.climatechoices.org



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California Climate Choices

A Fact Sheet of the Union of Concerned Scientists

Emissions Scenarios*	Summary of Projected Global Warming Impact, 2070 to 2099 (as compared with 1961-1990)	Statewide Temperature Rise
Higher Emissions: Rapid, fossil-fuel intensive growth	<ul style="list-style-type: none"> 90% loss in Sierra snowpack 22-30 inches of sea level rise 3-4 times as many heat wave days in major urban centers 4-6 times as many heat-related deaths for major urban centers 2.5 times more critically dry years 20% increase in energy demand 	Higher Warming Range: 8-10.5°F
Medium-High Emissions: Primarily fossil-fuel dependent growth with improvements in energy efficiency	<ul style="list-style-type: none"> 70-80% loss in Sierra snowpack 14-22 inches of sea level rise 2.5-4 times as many heat wave days in major urban centers 2-6 times as many heat-related deaths in major urban centers 75-85% increase in days conducive to ozone formation 2-2.5 times more critically dry years 10% increase in electricity demand 30% decrease in forest yields (pine) 55% increase in the expected risk of large wildfires 	Medium Warming Range: 5.5-8°F
Lower Emissions: Less fossil-fuel dependent growth with heavy investment in cleaner technologies	<ul style="list-style-type: none"> 30-60% loss in Sierra snowpack 6-14 inches of sea level rise 2-2.5 times as many heat wave days in major urban centers 2-3 times as many heat-related deaths for major urban centers 25-35% increase in days conducive to ozone formation Up to 1.5 times more critically dry years 3-6% increase in electricity demand 7-14% decrease in forest yields (pine) 10-35% increase in the risk of large wildfires 	Lower Warming Range: 3.0-5.5°F

*Emissions scenarios defined by the Intergovernmental Panel on Climate Change.
Source: Cayan, D., A. Luter, M. Hazenmann, G. Franco, and B. Cross. 2006. *Climate Change Scenarios for California: an Overview*. California Climate Change Center report.

The More Global Warming Emissions are Reduced, the Less Severe the Consequences Will Be

CALIFORNIA HAS A CHOICE: continue emitting large quantities of global warming pollutants from its cars, power plants, and factories, or be a climate leader by making significant cuts in emissions and slowing global warming.

Heat-trapping emissions have to be greatly reduced in order to avoid the most severe consequences of global warming. If the industrialized world were to follow California's lead of reducing emissions 80 percent below 1990 levels by 2050,

and industrializing nations followed thereafter, global emissions would remain in or below the lower emissions scenario (see table above), thus increasing the likelihood that California and the world would be on track to avoid the more severe effects of climate change. Emission reduction targets such as those set by the state of California could create the incentives and spur innovation necessary to lead a global transition to cleaner and more resource-efficient technologies. ■



Bureau of Land Management



Union of Concerned Scientists

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Aggressive Long-term Emissions Reduction Targets

- 1990 levels by 2020 -- AB 32
- **CA State Executive Order**
(June 2005)
 - 80% below 1990 levels by 2050

Case for California Action

- International relevance
 - Globally significant economy
 - Globally significant emitter
- National importance
 - Technology innovator
 - Policy incubator
 - Lack of action at Federal level
- Economic prudence
 - “No regrets” options abound
 - Export opportunities for state

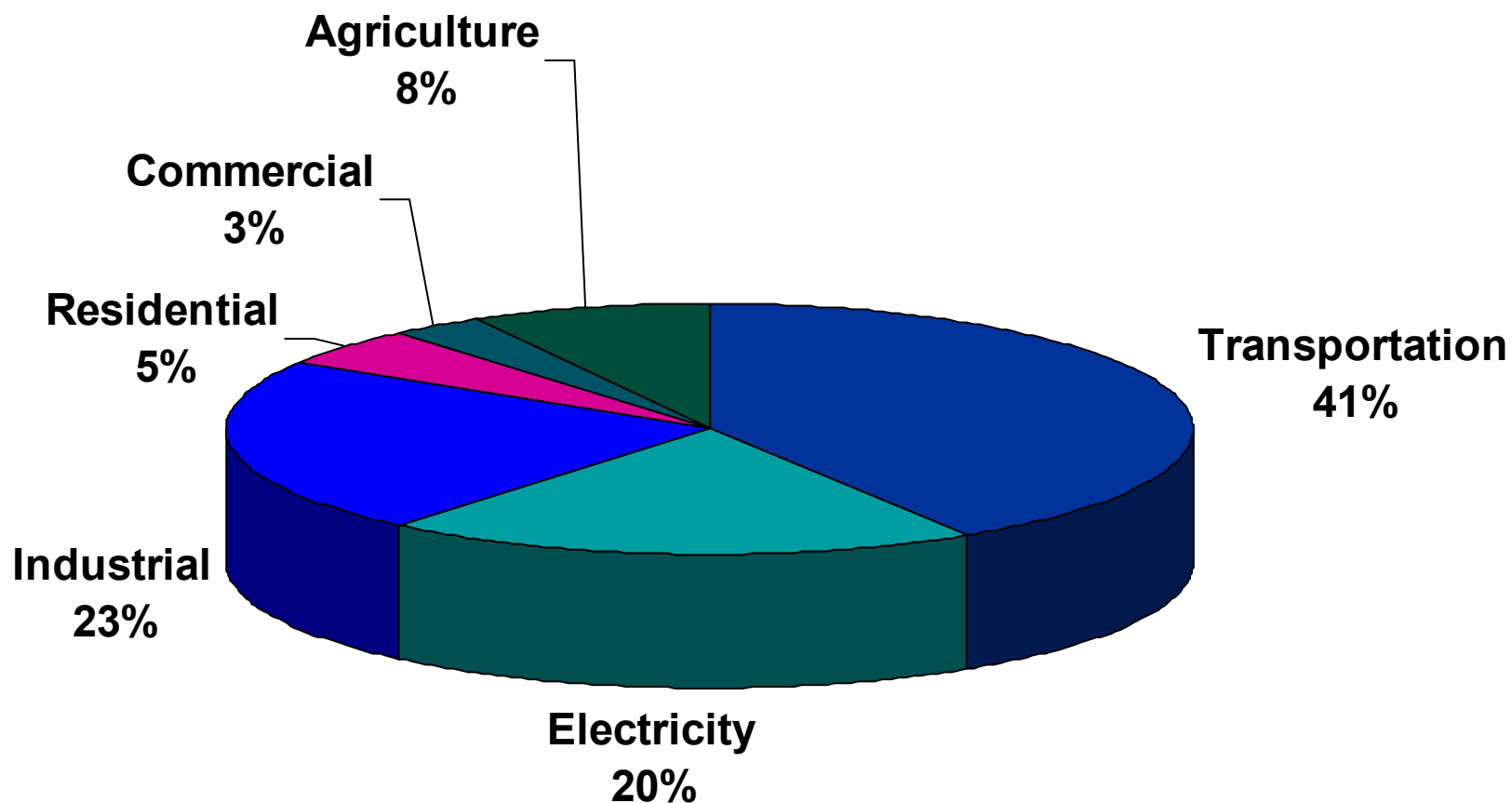




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Transportation is the largest source of California's global warming emissions



GHG Emissions from Electricity still significant in CA

Addressing Climate Change in California

□ Where do GHGs come from (CA)

- Transportation sector accounts for ~42% of CO₂ emissions in CA
- Electricity accounts for ~21% of CO₂ emissions



□ Reduce emissions of heat-trapping gases

- **Transportation Sector** – Vehicles and Fuels
- **Electricity Sector** – Renewables and Efficiency



□ Renewables – Transportation Connection

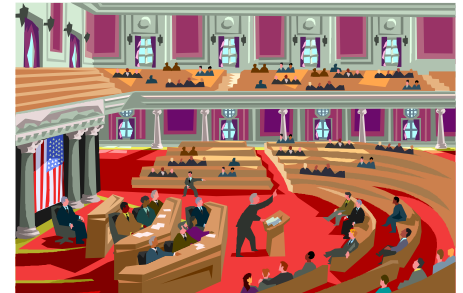


California Global Warming Solutions Act AB 32

(Nuñez/Pavley)

Signed by **Governor Schwarzenegger**

**By 2020, Reduce
GHG Emissions
to 1990 Levels**



(25% below business as usual)



California Global Warming Solutions Act (AB 32 - Nuñez/Pavley)

- ❑ Broad authority given to California Air Resources Board (CARB) to implement cap on emissions
- ❑ Mandatory Reporting and setting of baseline
- ❑ “Early Action” Regulations
- ❑ Market Mechanisms – will include electricity sector
- ❑ Coordination with other relevant agencies, including the Public Utilities Commission and the Governor’s Climate Action
- ❑ Creation of Advisory Committees

Transportation Sector GHG Reduction Strategies

- ❑ Inaction at the Federal level
- ❑ Significant reductions are needed – especially in car-centric states such as California.
- ❑ Greenhouse gas Vehicle Emission Reduction law (AB 1493 - Pavley) – New Cars (2009) (challenged in court) + *11 states*
- ❑ CA Clean Car Discount (“feebates”)
- ❑ Low-Carbon Fuel Standard
- ❑ Alternative Fuel/Advanced Technology Vehicle Mandates

California Clean Car Discount AB 493



**Making Cleaner Cars
More Affordable**



What is the CA Clean Car Discount?

- ❑ Market-oriented incentive program to reduce global warming emissions from vehicles
- ❑ Makes cleaner cars more affordable for everyone
- ❑ Authored by Assemblyman Ira Ruskin
- ❑ One time rebates/surcharges on *new* vehicles based upon global warming emissions

How does CCCD work?

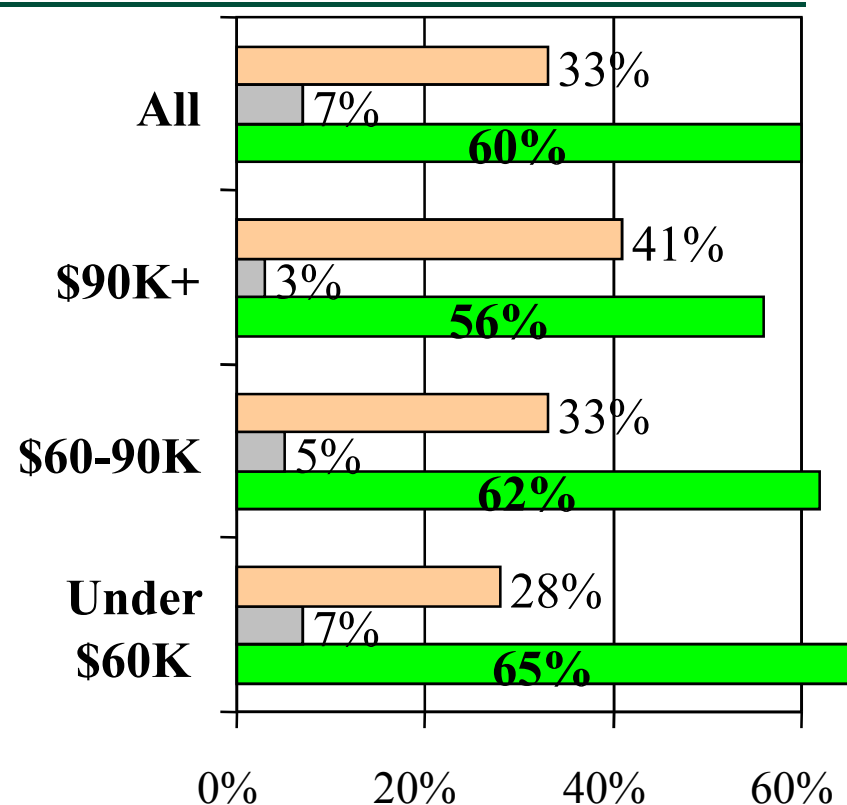
- ❑ \$2500 Maximum Rebate/Surcharge
- ❑ 20% of vehicles in “\$0 band” which helps to preserve vehicle choice for families.
- ❑ Self-Financing—surcharges pays for rebates and administrative costs
- ❑ Very small businesses, emergency responders, low income, and disabled exempt from surcharge.

What are the benefits of AB 493?

- ❑ AB 493 provides double-double incentives
 - Provides incentives for consumers to choose cleaner vehicles AND provides an indirect incentive for manufacturers to install clean technology.
 - Affects all passenger and light-duty trucks (SUVs, Minivans, pickups) vehicles—clean and dirty
- ❑ Most vehicle types have at least some vehicles in zero band
- ❑ ARB required to adjust rebates/surcharges and zero band annually to keep program self-financing and to preserve vehicle choice considerations.
 - Maximum Surcharge/Rebate fixed by law at \$2500

Public support by income levels

- Independent polling done to gauge support for CCCD
- Sixty percent of voters support CCCD
- Broad-based support among income levels



■ Support ■ Undecided ■ Opposed

Fairbanks, Maslin, Maullin, and Associates poll, February 2006

Smart Growth and the Need for Regional Action

- ❑ State is hoping that there will be substantial emission reductions through smart growth and better transportation planning.
- ❑ Should every local jurisdiction have a climate mitigation element as part of their general plan?
- ❑ Should regional agencies be given statutory authority to develop and implement regional climate mitigation plans?
- ❑ What incentives can be directed toward local jurisdictions to encourage them to make more climate-friendly planning decisions?
- ❑ Shouldn't greenhouse gas mitigation be incorporated into CEQA (Environmental Impact Reports)?

Electricity from Renewables

▣ **CA Renewable Portfolio Standard**

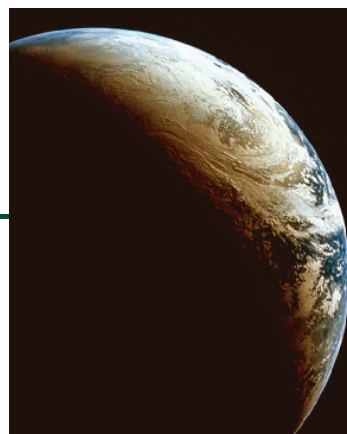
(RPS), aka Renewable Electricity Standard

- 20% by 2010 (SB 1078 - Sher / SB 107 - Simitian)
- *Eligible* Renewables only
- Investor-Owned Utilities (IOUs)
 - ▣ Proceedings at the CPUC
 - ▣ Renewable Energy Credits
- Municipal utilities
 - ▣ Vague requirements + reporting to CEC



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The Most Expensive Thing We Can Do Is Nothing

*An Open Letter on Global Warming
from California Economists*

August 2006

Dear Governor Schwarzenegger and California Legislators,

AS CALIFORNIA ECONOMISTS with expertise in energy and environmental policy, we believe that the State of California should move quickly to control global warming gases.

California's economy is vulnerable to climate impacts, including changes in water availability, agricultural productivity, electricity demand, health stresses, environmental hazards, and sea level. Action to reduce emissions will lower the costs of adjusting to climate-related disruptions and serve as public insurance against more dramatic damages that can be expected when opportunities to adapt are limited.

While global climate change poses significant risks to the California economy, we believe that well-designed strategies to limit global warming gases can reduce emissions substantially at low or no cost to the state, and could yield economic (as well as climate) benefits. Well-designed strategies can stimulate innovation and efficiency, which could help the state become a technological leader in the global marketplace.

Global warming gases will be best managed through a combination of policy approaches. Emissions caps combined with a range of regulatory and market-based implementation mechanisms offer a particularly potent strategy because they provide clear incentives for changes in business practices and the development of new technologies. Such an approach assures that economic forces are directed to finding the most efficient means of reducing emissions.

We urge you to accelerate climate action policies that will demonstrate political leadership and create economic opportunities in California. The most expensive thing we can do is nothing.

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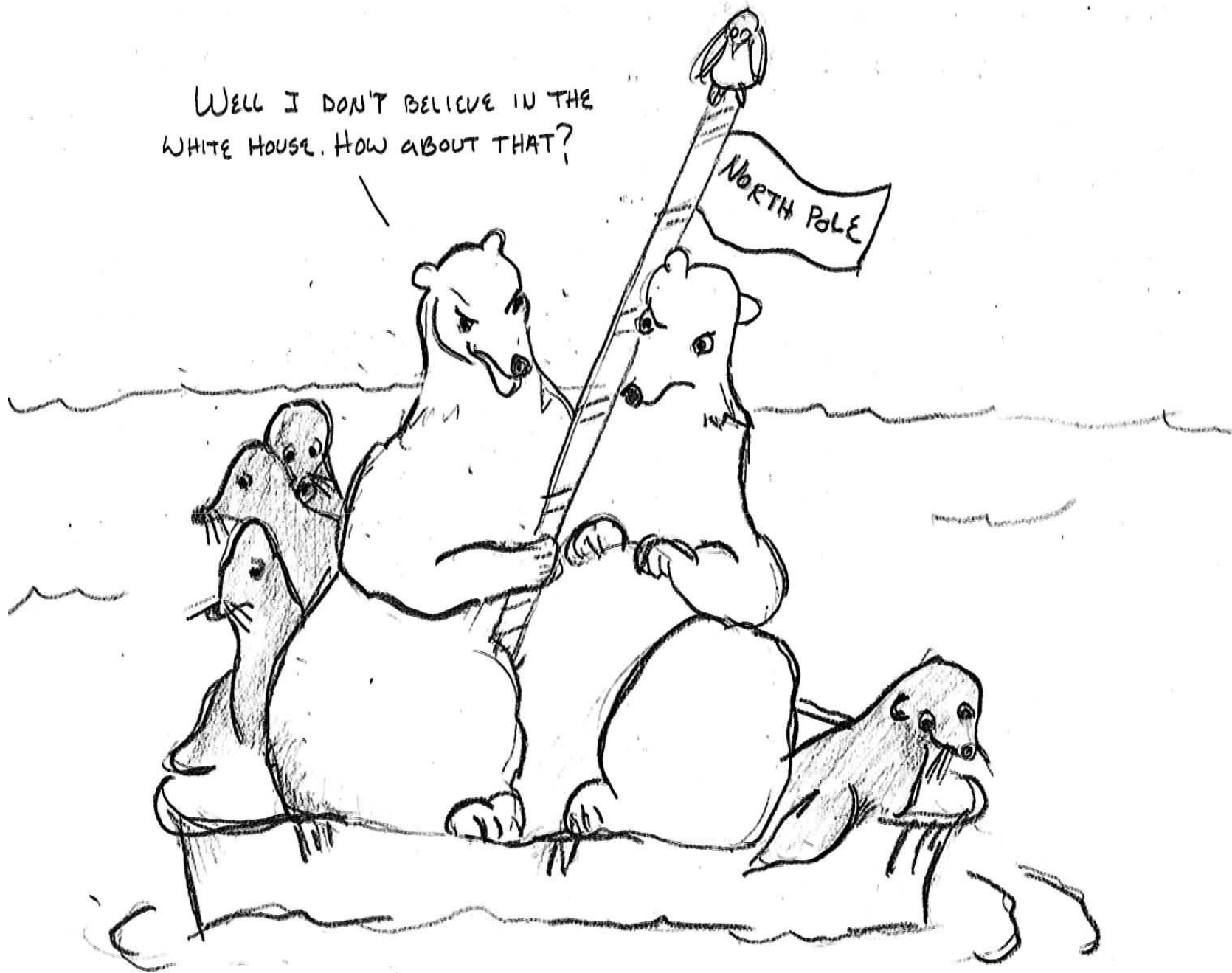
* Nobel Laureate
Organizational affiliations are for
identification purposes only.

www.climatechoices.org



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Sound Science, Practical Solutions

WELL I DON'T BELIEVE IN THE
WHITE HOUSE. HOW ABOUT THAT?





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The word 'THANK' is in a tall, thin, blue, sans-serif font. The word 'YOU' is in a thick, 3D, blue, sans-serif font. The letters are set against a black rectangular background that is slightly tilted.

UNION OF CONCERNED SCIENTISTS

[www.ucsusa.org/ clean_california](http://www.ucsusa.org/clean_california)



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EXTRA SLIDES
